

SWBAT: contrast natural frequency and forced vibration

Jan 4-7:20 AM

Concept Sheet

~ 7 rows when we're done...

We'll fill in two terms (rows) today.

Concept	Meaning	Sym-bol	Units	Picture
FREQUENCY	HOW MANY PER UNIT OF TIME $\text{FREQ} = \frac{\#}{\text{TIME}}$	$f$ $f = \frac{1}{T}$	hertz $\text{Hz} = \frac{1}{\text{sec}}$	
PERIOD	HOW MUCH TIME FOR ONE. PERIOD = $\frac{\text{TIME}}{\#}$	$T$ $T = \frac{1}{f}$	seconds sec.	
TRANSVERSE	WHEN THE MEDIUM VIBRATES ACROSS THE DIRECTION THE WAVE TRAVELS.			
LONGITUDINAL	WHEN THE MEDIUM VIBRATES ALONG THE DIRECTION THE WAVE TRAVELS.			
AMPLITUDE	HOW FAR FROM THE MIDDLE.	$A$	meters m	
WAVELENGTH	HOW FAR FOR ONE "BACK & FORTH"	$\lambda$	meters m	
WAVESPEED	$\frac{\text{DISTANCE OF A WAVE}}{\text{TIME OF A WAVE}}$	$v$	$\frac{\text{meters}}{\text{second}}$ m/s	

Feb 18-6:50 AM

# Welcome!!!

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SECA Physics  
Wednesday 30 April 2014

- \* Pick up:
  - half sheet
  - blue concept sheet
  - slip of paper (for later)



Centering

## Opening Question:

What ways of making music do you have where you live / in your family???

PERCUSSION / VOCAL / BEATS

Sep 7-7:04 AM

## Instruments:

How many ways can you find to change the sound of an instrument?

TIGHT / LOOSE  
 GUITAR / DRUM  
 DEEPER  
 HIGHER PITCH / LOWER PITCH  
 LOUDER / QUIETER

Apr 21-7:45 AM

Categories for changing sound:

INTENSITY : AMPLITUDE  
= LOUDNESS

PITCH : FREQUENCY

QUALITY  
OF  
SOUND

TIMBRE : INTERFERENCE

Categories of INSTRUMENTS:

PINK

STRINGS

YEL

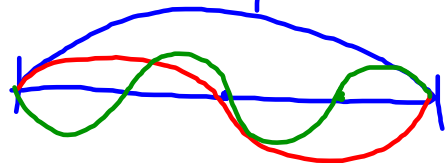
AIR TUBES / COLUMNS

BLUE

PERCUSSION

Brainstorm instruments...

HARMONICS  
How many  
 $\lambda$  FIT



May 4-7:56 AM

TROMBONE

<sup>AIR.</sup> TRUMPET

SAXOPHONE

<sup>PERC.</sup> KEYCHAINS

PICCOLO

<sup>STRINGS</sup> BANJO

CLARINET

CELLO

BASS

UKULELE

PIANO

<sup>PERC. & STRING</sup>

CYMBALS

<sup>AIR.</sup> OCARINA

<sup>STRINGS</sup> HARP

<sup>AIR</sup> ORGAN

WINE GLASSES

GUITAR

DRUMS

VIOLIN

OBOE

GONG

WIND CHIMES  
<sup>AIR & PERC</sup>

Apr 30-8:37 AM

## Daily 3 Questions

CP hmwk: Catch up on homework!

- \* Every day except test/project days
- \* 3 Questions on the topics of the day
- \* Main source of daily points
- \* I am happy to give credit when I have no concerns about someone giving or getting help with the answers.

You can't get your points if you don't have your NAME!!!

Name	Period
1.	
2.	
3.	

Sep 9-7:32 AM

1) Which sound word corresponds to AMPLITUDE?

- A) pitch
- ☒ B) intensity
- C) timbre

2) Which sound word corresponds to FREQUENCY?

- ☒ A) pitch
- B) intensity
- C) timbre

3) What is ONE of the three categories of instruments?

AIR, STRINGS, PERC.

Apr 25-7:25 AM